

ADULT EDUCATION IN WILLIAMSPORT



Evening School Courses

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Education In A Changing World

Many people have come to realize that education is a never ending process which continues throughout life. Only a chosen few can afford the advantages of a formal college or university education after completion of their high school studies. The great mass of people who terminate their formal education in high school desire an opportunity to continue their education for additional cultural information and to better prepare them for vocational and leisure time pursuits. The Adult Education Program of the Williamsport School District is dedicated to the philosophy that every effort should be made to meet the educational needs of the public at all age levels. The Adult Education Program is serving and is ready to serve the public in whatever skills or intellectual pursuits they desire.

General Information

The courses described in this folder are intended for *all* adults of the Williamsport area. The courses are intended for:

1. Adults who want to improve their skill or knowledge in their trades or occupations.
2. Unemployed adults who want to prepare for a job.
3. Employed adults who want to prepare for a better job.
4. Apprentices who need related training.
5. Adults who wish additional knowledge and training which will help in everyday living.
6. Adults who are looking for opportunities to develop their hobbies.
7. Adults who are seeking recreation through community groups such as musical organizations, athletics, etc.

The Calendar

Registration: This will be held on Monday, Tuesday, and Wednesday, of the last week of September.

Classes will be held from the first Monday evening in October until the last of April. The usual school holidays will be observed.

Sessions

Classes meet either one or two evenings per week. See individual course descriptions in this booklet for detailed information.

How To Enroll

Go to the Senior High School Cafeteria on West Third Street on the registration days, between 7 and 9 P.M. to register for the course or courses in which you are interested.

Costs And Fees

The courses described are available to all residents of the Williamsport area. The only cost is a registration fee of \$2.00 which is required of everyone on the night of registration. This fee is returned if you attend 75% or more of the classes. However, students who enroll and do not attend any class, forfeit their enrollment fee. Books and supplies are provided by the student. In a few courses there is a special material fee.

Instructional Staff

The instructional staff is composed of members of the Williamsport professional school staff and outstanding persons from industry and business.

Certificate of Achievement

A certificate of achievement will be issued to any enrollee completing 75% or more of the total sessions of a specific course.

Auditing

This advanced accounting calls for discussion of the principles of auditing, preparation of reports, finding errors, writing of letters as a means of verification, duties and responsibilities in work and in court. Actual practitioners will find that this course will be valuable and helpful. C. P. A. candidates will also find that this course will be helpful to them.

Class meets Tuesday evening, 7 to 10 P. M.

Bookkeeping And Accounting, Elementary

Industry and business both have personnel desiring to become familiar with record keeping. This course not only familiarizes the students with the principles of bookkeeping, but also prepares one to keep books for a single proprietor on a double entry basis. The philosophy of debits and credits, the analysis procedure, journalizing, posting, adjusting and closing work, controlling accounts and special journals and statements will be covered in this course. A practice set will appropriately review all the fundamentals covered.

Class meets Wednesday evening, 7 to 10 P. M.

Bookkeeping And Accounting, Advanced

For the business and industrial person who knows the fundamentals of bookkeeping, this



course will further the knowledge of handling notes and trade acceptances. Capital accounts and drawing accounts will be given with an emphasis upon corporation and partnership. A special practice set and special problems for these two types of ownership will be the appropriate review for this type of course.

Class meets Tuesday evening, 7 to 10 P. M.

Business English

This course is offered for those persons in business or industry who wish to improve their use of English. Punctuation, capitalization, sentence and paragraph building, speech improvement, the form and preparation of the business letter, and practice in writing business letters will constitute the work in this course.

Varied techniques, projects, and live business practice add to the interest and practical value of this course.

Class meets Monday evening, 7 to 10 P. M.

Business Law

The course in Business Law is designed to acquaint the individual with the necessary legal information pertaining to sales and retailing, mainly in respect to civil law. It covers property, contracts, bankruptcy, agency, negotiable instruments, guaranty and suretyship, sales, insurance, partnership, corporation, and labor legislation. This course should be of interest to adult retail store personnel, salesmen and agents, and others interested in conducting their own businesses.

Class meets Wednesday evening, 7 to 10 P. M.

Business Machines

In the Business Machines course you will first become acquainted with the operating principles of the various machines and then



practice to gain speed and skill. The following machines will be covered: adding-listing, com-tometer, electric typewriter, adding-bookkeeping, electric and hand driven calculators, duplicating machines, and dictating and transcription units.

Class meets Tuesday evening, 7 to 10 P. M.

Business Mathematics

This course may serve the business person who wishes a thorough review of the fundamentals of arithmetic, as well as that person who wishes to improve his problem-solving knowledge. The following units will be covered: speed development in doing addition, subtraction, multiplication, division, fractions, decimals, percentage, mensuration, and the practical application in figuring selling price, interest and discounts. Partial payments and equation of accounts will also be given in this course.

Class meets Monday evening, 7 to 10 P. M.

Cost Accounting

This course is designed to aid the person interested in business and industrial accounting who wishes to enlarge his knowledge of cost systems and the principles involved in this type of work. Factory accounting, large and small business practices, and executive interpretation

will also be featured in this course. Executives, accounting personnel and office managers will find that this course will aid them in their work.

Class meets Wednesday evening, 7 to 10 P. M.

Merchandise Mathematics

The course in Merchandise Mathematics is designed to acquaint the individual with the proper applications of mathematics to the peculiar problems encountered in the daily routine and operation of a retail business. It covers purchasing, pricing, inventorying, expense distribution and accounting statements. It will be of interest to retail store personnel and various other persons.

Class meets Monday evening, 7 to 9 P. M.

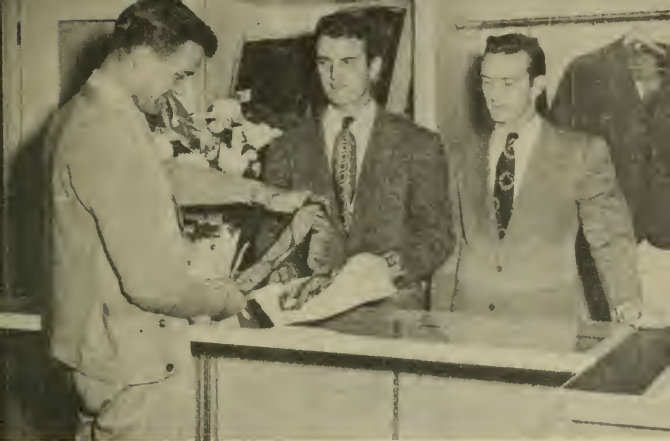
Pre-Christmas Training

The course in Pre-Christmas Training is designed to help prepare high school students and others for part-time store sales employment during the Christmas season. It covers required characteristics of the salesperson, sales personality, employment applications, mathematics in store work, knowledge of merchandise, steps of the sale and store systems. It is organized around practice sales in the store, demonstrations in the classroom, problems, questions and visual aids. This course is of interest to high school students and others interested in retail sales work during the Christmas rush season.

Class meets once a week for eight weeks from 3:30 to 5:30 P. M., beginning about October 15.

Retailing

The course in Retailing is designed to provide instruction in the management and operation of retail stores, particularly the small and middle-sized store. It covers store location, layout, equipment, and organization, merchandis-



ing, store management, sales promotion, and fiscal control.

Class meets Tuesday evening, 7 to 9 P. M.

Salesmanship

The course in Salesmanship is designed to acquaint the individual with the steps of the sale and the psychology of selling. It covers personality, persuasion, buying and selling motives, knowledge of merchandise, steps of the sale, sales campaigns, and the building of good will. This course is organized in a series of lessons, with related information, questions, projects, and outside speakers. It is designed to appeal to adult retail store personnel, salesmen and agents, and others interested in entering the selling field as a career, or in advancing from present positions to higher ones.

Class meets Tuesday evening, 7 to 9 P. M.

Secretarial Duties And Functions

This course is intended for those persons in business who wish to have a refresher course along the lines of secretarial preparation. The course will be divided into the following units: dictation and note taking, 15 hours; typing clinic, 15 hours; filing, 9 hours; office machines, 21 hours; 12 hours for general office

procedure, reports, organization, making appointments, and telephone manners. Special trips, films, and outstanding persons who are in executive positions will add to the interest of this course.

Class meets Thursday evening, 7 to 10 P. M.

Shorthand, Beginning

Beginning Shorthand is given in our evening school for those persons in business who want to get a knowledge of the principles of writing Gregg Shorthand. The course will include mastery of characters, word signs, and basic vocabulary drills. Dictation will also be given and letter practice will be a definite part of this course.

Class meets Monday and Tuesday evenings, 7 to 10 P. M.

Shorthand, Advanced

The first part of this course is given for those in business who wish to build up speed in taking dictation, or who are preparing for Civil Service ratings. A quick review of the fundamentals of writing Gregg Shorthand will be given at the outset of the course. Special speed drills, tape and victrola records, as well as visiting executives will provide variety in giving dictation.

The second part of this course, Court Reporting, will involve individual techniques and speed drills in handling all kinds of reporting and dictation.

Class meets Thursday evening, 7 to 10 P. M.

Typing, Beginning

Beginning typing is offered for Seniors in high school and persons in business and industry who desire to learn touch typing. The instruction will include parts of the typewriter,



correct fingering, rhythm, and correct habits for speed and accuracy. A speed of 40 words a minute with less than 5 errors is an objective for this course.

Class meets Tuesday and Thursday evenings, 7 to 10 P.M.

Typing, Advanced

The business person who wishes to improve his or her typing ability and increase speed will find this course of value. Letter arrangement, tabulation, carbon usage, business papers, speed and accuracy developement will be covered. A speed of 60 words a minute with less than five errors will be the standard for this course.

Class meets Monday evening, 7 to 10 P.M.



Effective Speaking

A condensed course in the fundamentals of effective speaking. Fundamentals underlying good speech, organization of thought, its presentation through effective vocal and bodily activity. Delivery of as many speeches as time permits. Fundamentals of effective after-dinner and platform speaking. Not intended for those persons who intend to become professional orators, but instead, designed especially for those persons who may frequently be in a position where they may be called upon to give a talk or speech to some group or small audience. This course will help such persons to gain confidence, ability and poise when appearing as a speaker or discussion leader.

For class meeting nights, inquire at time of registration.

French = German = Spanish

The ability to speak and understand languages other than English is a great asset in many occupations. These courses are designed for those who wish to acquire a practical knowledge of a foreign language. Essentials of grammar presented through graded readings, with continuous oral exercise. Grammar, reading, conversation.

Open to beginners as well as advanced students.

For class meeting nights, inquire at time of registration.



Instrumental Music

The study and playing of symphonic music. Persons enrolling in this will have the opportunity of becoming a member of the Williamsport Symphony Orchestra. All members of the group will be auditioned by the instructor. Applications for the use of a school owned instrument should be filed with the instructor.

Parliamentary Procedure And Persuasion

Analysis and practice of those parliamentary principles and rules of most frequent occurrence. How to conduct meetings or group discussions while using the principles of parliamentary procedure.

Techniques of persuasion as applied on the platform, in the conference room, and in the parliamentary assembly.

For class meeting nights, inquire at time of registration.

Sports Appreciation

Discussion of the sports in which folks of this area are interested, or frequent spectators. Rules interpretation as they apply to the various sports events and activities. Discussion and movies of outstanding sports events. (Especially football during season.) This course offers to the average person a means of seeing more games (through movies) plus better appreciation of the games seen as well as the ones heard on the radio and read about in the newspaper.

Community Problems Discussions

From time to time there arise various problems concerning the advancement and welfare of the community. The School District is prepared to assist in community discussions of these problems through town meetings, forums or organized discussion groups.

One of the most successful types of community discussions conducted by the School District in the past has been a series of not more than ten weekly meetings of the interested groups. A trained conference leader is available to organize and assist in the discussions, and outside experts are available to present the facts and technical information. These discussions usually result in a report to the community and a planned course of action.

The sponsoring of such community discussions by the School District does not mean that the schools or the faculty are advocates of a particular program or course of action. The schools, as representatives of the public, cannot take sides.

The time and place of meetings will be determined for each discussion group to suit the needs of the group.

Dramatics

Training in pantomime, voice production, acting, make-up, and staging. This is accomplished with the class participating in the actual production of plays for the public. Plays which have been given by the class for the public are:

The Boor — Chekhov

Balcony Scene — Elser

Suited for Charity — McCoy

Bridled — Leshner

Class meets Monday evening, 7 to 10 P. M.

Woodworking And Metalworking Hobby Classes

Three separate hobby classes in woodworking and metalworking will be offered. These will be conducted at Stevens Jr. High School, Curtin Jr. High School, and the Williamsport Technical Institute. These classes offer an opportunity for those interested in these fields of work to use many of the fine tools, machines, and equipment used in the schools of Williamsport. An experienced teacher will supervise the work and offer suggestions and advice when needed. The type of projects or work done in these classes will depend largely upon the wishes and desires of the class members.

Classes tentatively scheduled for Monday and Wednesday evenings, 7 to 10 P.M. This may be changed, however, to suit the class members.

Photography

This is a combined class for both beginning and advanced amateurs. The phases of photographic work to be covered will depend to some extent upon the wishes of the individual class members. Basic photographic fundamentals will include developing, printing, and enlarging. Portrait lighting, oil coloring, toning, mounting, composition in enlarging, and various methods of making Christmas cards will also be included.

Class meets Monday evening, 7 to 10 P. M.

Art Workshop I

A course designed to aid the amateur artist-decorator in the decoration of fabrics, furniture, and tinware. A type of design that is functional and encourages the very best in color, design and arrangement for home use. The course is based on the study of design, color, materials, media, technique, application and use. The course aims to aid the inexperienced crafts-



man as well as the artist in decorating those things that are considered artistic, in a simple way, with the greatest consideration for good design qualities and expression of individuality.

The course includes the following projects of study . . . textile decoration: simple stencilling, block printing, and silk screen decoration. Tin ware decoration: trays, spice boxes, baskets, etc. Restoration of furniture: Penna. German, early American (colonial) that require decoration in either stencilled designs, painted, bronzed, or underglazed designs. Basic design problems are included for background material prior to any design problem.

Prerequisites: A knowledge of design, color and the use of art media is always a great help in any art course. However, this course has been designed to aid the inexperienced and, therefore, eagerness to experiment with design and art media is encouraged.

Class meets Monday and Wednesday evenings, 7 to 10 P. M.

Art Workshop II

Consists of various types of art work which may be used as a hobby, or general information which may be applied to every day use. It consists of such media as textile painting on such

articles as luncheon cloths, napkins, wearing apparel, or on any other type of cloth which may be used.

The course will also include such things as tray painting on metal trays, wooden bowls, or various other articles of the household which one can decorate. Other forms of art offered in this course may be water color, oil painting, pencil sketching, or various other forms of art which may be to the liking of the individual choosing this course.

Class meets Wednesday evening, 7 to 10 P. M.

Ceramics

This class will include the teaching of basic instructions in ceramics and pottery. The teaching of applying glazes, constructing pottery such as dishes, bowls, figurines, ash trays, and various other things that apply to pottery.

Also included will be the application and designing of Pennsylvania Dutchware and various other articles which an individual may wish to construct. This course gives the knowledge and information of how ceramic clays are obtained and also a general idea of how our modern dishware which is used in the home is made by commercial potters.

Class meets Monday evening, 7 to 10 P. M.



Metalcraft

The making, by hand, of jewelry, trays, plaques, candleholders, ash trays, bowls, plates, etc.

Metals may be hammered, acid etched, engraved, chased, pierced, embossed. Metals used are copper, brass, silver, aluminum and various alloys.

Opportunity for individual creative work.

Class meets Monday evening, 7 to 10 P.M.

Needlecraft

This is a workshop in all kinds of needlework except plain sewing. Each member of the class chooses what she wishes to learn. A typical year includes knitting, crocheting, hooked and braided rugs, embroidery, tatting, needle-point, bobbin lace, quilts.

Class meets Thursday evening, 7:30 to 9:30.

Weaving

Beginning weaving includes work on inkle looms, Egyptian cards, floating heddles and a sampler made on small floor loom.

Advanced weaving includes work on any floor loom depending on article student wishes to make. Work includes calculating amount of thread needed, reading drafts, threading looms, weaving and finishing work. Articles made include napkins, towels, mats, bags, rugs, luncheon sets, baby blankets and upholstery material.

Class meets Monday evening, 7 to 10 P. M.

Fly Tying

Instruction in basic types of fishing flies, including wet flies, dry flies, streamers, and nymphs. Tying of leaders and various knots. Information as to how to fish each type of fly, when to use it, what type waters to use it on, water temperature, etc.



Various type bodies such as quill bodies, fur dubbing bodies, chenille bodies, and silk floss bodies. Wings such as rolled duck wings, quill wings, hair wings, spent wings, fan wings, and wings made with a wing cutter tool.

Both a class for beginners and a class for advanced fly tyers will be given.

Class meets Monday evening, 7 to 10 P. M.

Textile Painting

Painting on textiles by the direct method, stenciling, silk screening or block printing. This also includes the study of attractive color combinations and the mixing of colors.

Each member of the class furnishes her own paints, brushes, and material to paint. The kinds of articles painted are: children's clothing, table linen, draperies, curtains, blouses, skirts, and many other similar articles.

Class meets Wednesday evening, 7 to 10 P. M.

Elementary Clothing

The Elementary Clothing Course is open to any adult who wishes to learn sewing techniques. No previous knowledge or experience is required. Each student works on individual problems and during the course will receive instructions in selection of the correct size pattern, proper alteration of the pattern, preparation of the fabric for cutting, correct placement of the pattern on the fabric and construction methods as well as use and handling of sewing tools and equipment.

Several classes may be offered. Definite class times will be determined at registration time.

Advanced Clothing

In the advanced clothing classes the emphasis is placed on the construction of silk and woolen garments. Some of the topics included are: color, design and economics as applied to dress, care and repair of clothing, selection of textile fabrics, clothing budgets, advanced construction processes and tailoring.

Class will meet one night a week. Several different classes or sections will be organized, however, to accommodate persons on different evenings during the week. Inquire concerning definite class hours at registration time.



Slip Covers And Draperies

The Slip Cover and Drapery Class is designed to teach experienced sewers the techniques of fitting and constructing slip covers and the methods of measuring, cutting and constructing draperies. Each student in Slip Covers works on a cover for her own piece of furniture. The furniture is moved into the classroom and remains there until the cover nears completion. It is required, therefore, that each student have a definite problem or problems before registration will be made. A student may make Slip Covers or Draperies or both if desired. The class is limited in enrollment so early registration is recommended.

Prerequisites: Must be able to operate a sewing machine and have had some experience in actual sewing.

Class meets Thursday evening, 7 to 10 P. M.

Possible Additional Home Making Courses

The following evening classes may be offered, provided there is sufficient interest and enrollment:

1. Home Nursing
2. Home Decoration
3. Meal Planning and Serving
- or
- Food Preparation
4. Family Living (Symposium)
5. Flower Arrangement
6. Upholstery

Aircraft Engine Mechanics

This course is intended to prepare men with some experience in the aircraft field for the C. A. A. written examination for Aircraft Engine Mechanics. It should be especially interesting to men who need an "E" license and to private or student pilots who wish to increase their knowledge of aircraft engines. The course consists of theory of operation and maintenance of the engine; magnetos and electrical systems; carburetors and carburetion; lubrication and oiling systems; propellers, and civil air regulations.

Class meets Monday and Wednesday evenings, 7 to 9 P. M.

Automotive Mechanics, Elementary

A study of the fundamentals of modern automobiles. Analysis of engine operation, study of braking systems, investigation of power transmission. Methods of chassis construction and running gear. Lubrication, steering, and maintenance will be thoroughly explored.

Class meets Tuesday and Thursday evenings, 7 to 10 P. M.

Automotive Tune-Up Methods

The course in engine analysis and tune-up is divided into 4 units. (1) The Engine (2) The Ignition System (3) The Fuel System (4) The Electrical System. The course begins with the study of the basic fundamentals of operation covering the four units listed above. The service and repair of these units is studied, and the use of scientific test equipment is demonstrated.

This course covers especially the diagnosing of engine conditions, and the proper methods for the adjustments needed in engine tune-up.

Class meets Monday evenings, 7 to 10 P. M.



Automotive Tune-Up Applications

A technical course designed to teach the methods of dynamometer testing and measuring engine performance. In addition to teaching the application of engine diagnosis instruments, this course will teach the use of dynamometers, instruction in recording of test or experiment data, and interpretation of results.

Class meets Tuesday and Thursday evenings, 7 to 10 P. M.

Blueprint Reading For The Metal Trades

A course arranged in a progressive manner to assist a learner in interpreting the information shown on a blueprint which will enable the reader to visualize objects and to describe them in their true shape, size, application, and to obtain a knowledge of the conventional terms employed in industry.

The ability to read blueprints is essential for apprentices in all the metal trades. It is also valuable to workers in the trades who desire to advance in their respective occupations or to prepare for entrance into another type of work.

Prerequisites: Drafting experience desirable but not necessary.

Ability to add and subtract fractions and decimals.

Class meets Monday and Wednesday evenings, 7 to 9 P. M..

Automotive Wheel Alignment And Balancing

Both the theory and practical work in wheel alignment and balancing are covered in this course. The different subjects included are: a study of the machines used in wheel alignment and wheel balancing, geometrical principles of alignment, need for good alignment, results of unbalanced wheels, dynamic and static balance, and methods of aligning and balancing present day automobiles.

Class meets Monday and Wednesday evenings, 7 to 10 P.M.



Blueprint Reading (Machine Shop)

The course in Blueprint Reading is designed to teach all the basic information necessary to interpret a blueprint. It covers the alphabet of lines, the methods of projection, the relationship of views, an understanding of dimensions, the significance of symbols, and alterations or revisions which commonly appear on blueprints.

This course consists of information essential

for machinists, machine operators, patternmakers, core makers, molders, and apprentices employed in the metal working industries who desire to become more efficient in their present jobs or who want to prepare for promotion.

Class meets Tuesday and Thursday evenings, 7 to 9 P. M.

Commercial Or Basic Art

The work in this class consists of drawing and painting in all media: pencil, charcoal, watercolor, or oils. A broad training is given in basic design, composition, perspective, methods, and professional practice as applicable to advertising art.



Course Units: Elementary drawing and painting, advanced drawing and painting, still life painting, basic design and composition, methods and materials, perspective, professional practices.

Classes will be held for both beginning and advanced students.

Class meets Monday evening, 7 to 10 P. M.

Carpentry (Theory)

This course is not a shop course, but a class designed to teach the related information concerning carpentry and house construction which a journeyman carpenter must know. Items such

as the following are covered: Types of frame construction, methods of framing, sill, girder and floor framing, side walls and sheathing, roof framing and rafter problems, special framing problems, insulation, and stair lay out.

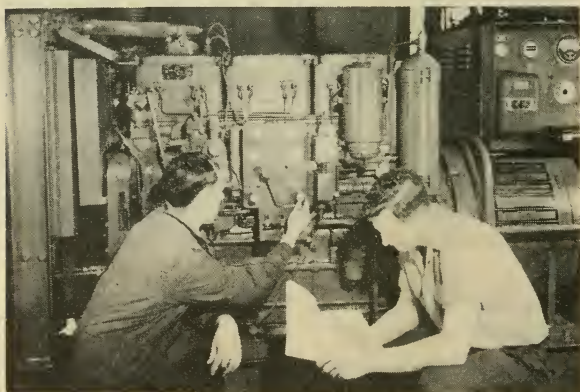
Prerequisites: Some carpentry experience would be useful. This course is designed primarily for carpentry apprentices.

Class meets Thursday evenings, 7 to 10 P. M.

Diesel Engine Mechanics (Elementary)

An introductory study of the principles of diesel engine construction. The course includes a study of the principles of diesel engine operation, analysis of diesel cycle, applications of diesel engines, methods of fuel injection, controlling engine speed, and diesel-electric plant operation.

Class meets Monday and Wednesday evenings, 7 to 10 P. M.



Drafting (General Mechanical)

This evening school drafting course is broad in nature and so arranged that one may prepare for entrance into drafting as an occupation, prepare for a specialized type of drafting, or sup-



plement his daily employment. All instruction is on an individual basis and a person may progress through the work just as rapidly as he is able to absorb the instruction.

As a student you will advance progressively from the use of instruments, dimensioning, orthographic projection, sectioning, auxiliary projection, through drafting standards and detailing. The course also includes sheet metal layout, gear, and cam drawing.

A thorough study of the standard procedures of a number of large manufacturing concerns is covered which gives the student a better idea of what to expect when going into industry as a draftsman.

Aircraft and ship lofting may also be included for the student when desired.

This course may be taken by beginners or advanced students.

Classes meet Monday and Wednesdays and/or Tuesday and Thursday evenings, 7 to 10 P. M.

Electrical Construction

Installation of wiring using non-metallic cable, installation of wiring using metallic cable, installation of wiring using rigid conduits, service

entrances, underwriters rules, power company requirements. Theory necessary for calculating wire sizes and use of meters in testing wiring.

Class meets Monday and Wednesday evenings, 7 to 10 P. M.

Electrical Maintenance (Industrial)

Installation and testing of lighting circuits.

Use of meters and testing equipment in finding faults in wiring controls, and motors.

Installation and testing motor controls.

Installation and testing motors.

Class meets Tuesday and Thursday evenings, 7 to 10 P. M.

Electrical Theory

This course is open to men who are working in trades requiring a knowledge of electricity or who are preparing for employment in the field.

The student acquires the theory necessary to a thorough understanding of his trade problems and thereby prepares himself for many opportunities in electricity.

All phases of both direct and indirect current are covered.

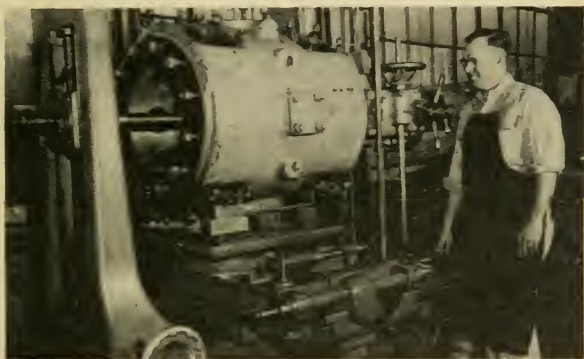


Principles of Ohms Law, volts, amperes, and resistance in series circuits and parallel circuits. Line drop. Power calculations, wire calculations, batteries, magnetism, communication systems, generators and motors. Electrical meters and instruments.

Class meets Monday and Wednesday evenings, 7 to 9 P. M.

Machine Shop Practice

The Machine Shop course consists of both practical work and theory. The course involves a thorough study of cutting tools, procedures and calculations, operation of the various machines, bench layout, and assembly work. Particular attention is given to a study of related trade information which foremen in industry



seldom have time to explain.

The course will be helpful to those who wish to prepare for work in this field, or for those who wish to prepare for promotion.

Class meets Tuesday and Thursday evenings, 7 to 10 P. M.

Farm Equipment Repair

The purpose of this course is to provide a practical coverage of farm skills and techniques

as related to the use, operation and service of farm equipment. It is designed for practical farmers who wish to improve their mechanical skills, and to keep up-to-date with the use of modern farm machinery.

In general the course will stress such shop practices as welding, forging, saw filing, wood-working, repairing of farm machinery, service and maintenance of farm tractors including major overhaul, soldering, and construction of farm equipment. For the purpose of instruction in specific skills, experts from various commercial farm equipment companies will be available as well as farm shop instructors.

Class meets Monday and Wednesday evenings, 7 to 10 P. M.

Mapping And Surveying

This course is intended for men engaged in Highway, Flood Control, Forests and Waters, or Survey work as well as any other persons who could profit from such a course.

The course consists of both theory and actual work with the various instruments of surveying, as the level and transit, the computations necessary in surveying, and practice surveys.

The drafting work includes plotting surveys from field notes. This type of exercise enables the student to see the direct results of the field work and impresses him with the need for good field notes.

Class meets Monday and Wednesday evenings, 7 to 10 P. M.

Metals And Their Heat Treatment

A study of the basic metals, their principal alloys and the problems arising in machining them. The hardening and heat treatment involving the use of furnace and quenching baths. Laboratory work will include actual experi-

ments in the hardening, tempering, quenching, and drawing of metals.

Class meets Monday evening, 7 to 10 P. M.

Offset Lithography Camera And Platemaking

This course is offered to all adults associated with the printing industry and others who are interested in learning more about this method of printing. It will consist of the following:

Camera Work - Line and halftone negatives, the lens, illumination, film, focusing, darkroom, chemicals, exposure, processing, and the use of filters.

Halftone Instruction - The photographic process, how to use the screen, exposure, and processing the negatives.

Platemaking - Stripping, the work after the negatives are made, such as making the flat, imposition, tints, etc.

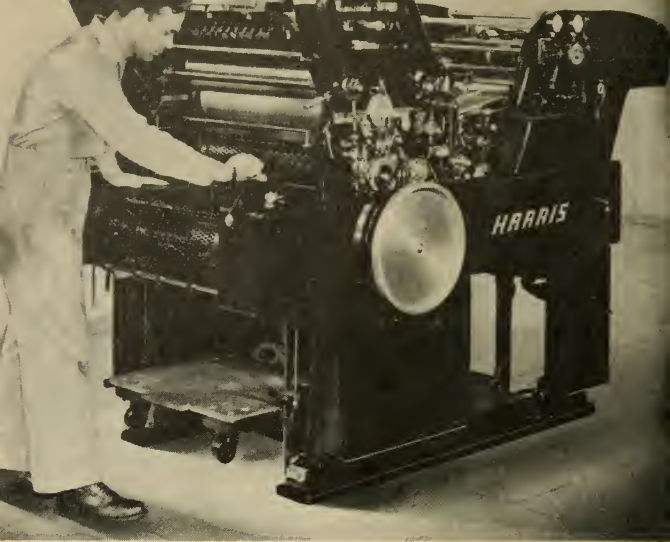
In the actual making of the plate we will make albumen, deep-etch and bi-metal plates. You will study chemistry, counter-etching, coating, exposure, development, etching, care of tools, and troubles encountered.

Class meets Monday and Wednesday evenings, 7 to 10 P. M.

Offset - Press Operation

This course will be offered to those who desire to further their knowledge of Offset Press Operation.

The operation of the modern Harris and Webendorfer offset presses is thoroughly covered. Some of the press adjustments and problems covered are paper handling, the feeder, setting the conveyor, side and front guides and setting the delivery, the care of the plate and blanket, handling gum and water, different inks and their characteristics, adjustments to the ink



fountain and the dampening system, cleaning the press, press troubles, and safety in the press room.

Class meets Monday and Wednesday evenings, 7 to 10 P. M.

Precision Measurement And Inspection

This is a study of the proper care and the proper use of precision tools and instruments used in the metal machining industry. The laboratory work will include the use, care, and maintenance of instruments such as micrometers, dial indicators, gage blocks, vernier height gauges, vernier calipers, comparator, hardness testers, micro-projector, and monochromatic light.

Class meets Monday evening, 7 to 10 P. M.

Radio (Basic) And Electronics

This course is intended for those desiring a fundamental course in radio service and electronics. The course includes basic electronic theory, the testing and construction of simple circuits, and servicing domestic receivers.

Class meets Monday and Wednesday evenings, 7 to 10 P. M.

Radio (Advanced) And Electronics

This course is intended for those already working in the radio and electronics field, and who desire additional knowledge. The course will include advanced radio and electronic theory, industrial electronics, advanced construction practice, and trouble shooting on electronics apparatus.

Class meets Monday and Wednesday evenings, 7 to 10 P. M.

Radio Communications

For those interested in obtaining radio telegraph and radio telephone licenses. Instruction in radio law and F. C. C. rules and regulations will be given. Broadcasting studio practice and international code will be included in this course.

Class will meet Monday and Wednesday evenings, 7 to 10 P. M.





Sheet Metal Layout And Drafting

An expert sheet metal worker must be able to solve both the mathematical and the geometrical problems in layout. This course is especially designed to supplement training of those persons now employed in the sheet metal trades, or of the man doing erection work where a knowledge of sheet metal pattern layout and sheet metal blueprint reading are essential to advancement.

All the fundamentals of laying out the common forms used in the sheet metal trade are taught including practical geometrical problems,

development of forms using parallel lines and radial lines, and triangulation problems.

This is an excellent course for the man who wishes to advance in his trade or go into business for himself.

Class meets Monday and Wednesday evenings, 7 to 10 P. M.

Shop Mathematics I

The purpose of this course is to give the men in industry an opportunity to review and study mathematics needed for every day shop work. This is a practical course designed to help the individual with his daily work.

This course includes the use of fractions and decimals, percentage, proportion, square root, areas of plane figures such as triangles, circles, ellipses, etc., and volume of solids, as applied to practical work.

Class meets Monday evenings, 7 to 10 P. M.

Shop Mathematics II

Basic algebra covering addition, subtraction, multiplication, division, factoring, equations, and solution of formulas; geometric constructions such as perpendiculars, tangents, polygons, ellipses, etc.; solution of right and oblique triangles by use of trigonometry; and the use of logarithms to simplify the work of long computations.

The scope of this course can be advanced beyond the above outline to meet individual needs.

Prerequisites: Mathematics I or its equivalent.

Class meets Monday evenings, 7 to 10 P. M.

Sign Painting

The sign painting course is designed primarily to help sign painters and helpers in the field. Individual problems in gold leaf, show



card lettering, window lettering, layout, and design are studied and worked out. The beginner is started on brush strokes and letter composition and receives a thorough grounding in these before going on to more difficult work.

Class meets Monday and Wednesday evenings, 7 to 10 P. M.

Slide Rule

A brief study of the types and features of slide rules; basic theory of operation; reading the scales; simple multiplication and division; proportion; squares and square root; decimal point location; cubes and cube root; areas of circles; combined operations.

The sessions may be extended beyond 15 weeks, if the class desires, in order to study more advanced work such as the use of the CI and folded scales, logarithms, trigonometry, and the log-log scales.

Possession of a slide rule is desirable but not essential.

Movies and film strips will be used in the instruction.

Advanced work on the slide rule can be given on an individual basis to anyone so desiring, concurrently with the regular class.

Prerequisites: Basic knowledge of mathematics such as covered by grades one through nine. The advanced work would require a knowledge of basic trigonometry and logarithms.

Class meets Wednesday evenings, 7 to 10 P. M.

Small Home Design

This is a well rounded course in the principles of design and construction as applied to modern homes. Persons working in any phase of the supply business, or the building trades will find it helpful in their work.

The course consists of design of all parts of the home, engineering calculations as to size of rafters, joists, etc., good construction practices, estimating costs, and finance.

Class meets Monday evening, 7 to 10 P. M.

Structural Drafting

In this course the student learns to design and detail wood, steel, and concrete structures and forms to carry heavy loads safely. Bridges and skeleton frames of industrial buildings are examples. The graduate will be qualified to work in an engineer's or architect's office on this type of work.

This course covers the use of instruments, descriptive geometry, basic architectural drafting, building codes, estimating, specifications, practical problems, working drawings, building construction practice, structure design, structure detail, and building materials.

Class meets Tuesday and Thursday evenings, 7 to 10 P. M.

Technical Illustration

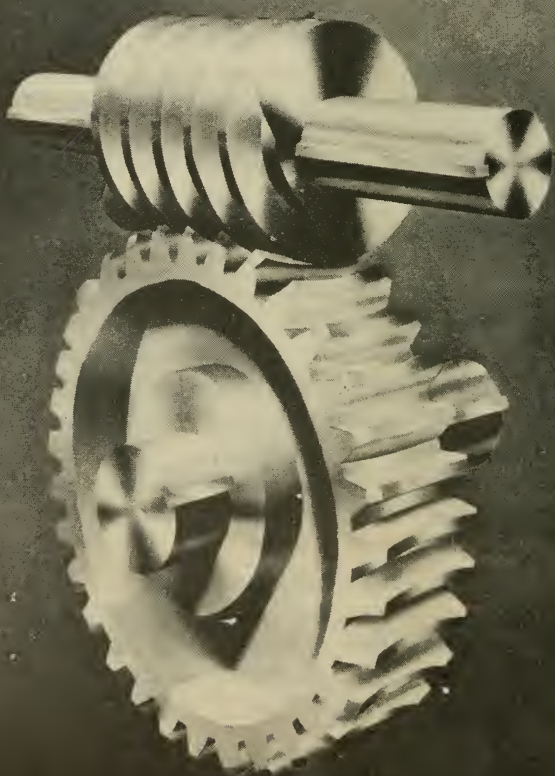
Technical Illustration refers to the preparation and illustration of technical or mechanical subjects for reproduction in advertisements, service manuals, or other printed material. Tech-

nical illustration is also used in modern visual aids work.

Persons working in or interested in photography, retouching, advertising, drafting, architecture, photo-engraving, etc., will find the course a valuable one.

Instruction is given in orthographic projection, one and two point perspective, rendering light and shadow by dry point technique, air brush, and photo-retouching.

Class meets Monday and Wednesday evenings, 7 to 10 P. M.



Tool And Die Design

This course is intended primarily for men now employed as machinists, tool and die makers, draftsmen, and tool designers. Some of the subjects and problems covered in the course are: designing of all types of jigs and fixtures, designing of gages, calculation of gage dimensions, and designing of dies.

Class meets Monday and Wednesday evenings, 7 to 10 P.M.

Tool And Die Making

The Tool and Die Making course is given for those who wish to become tool and die makers or for those already working at the trade and who want advanced work. A thorough study is made of the design and manufacturing of tools, jigs and fixtures, and dies. Actual practice is given on the most modern machines and the production of these modern tools.

Class meets Monday and Wednesday evenings, 7 to 10 P. M.

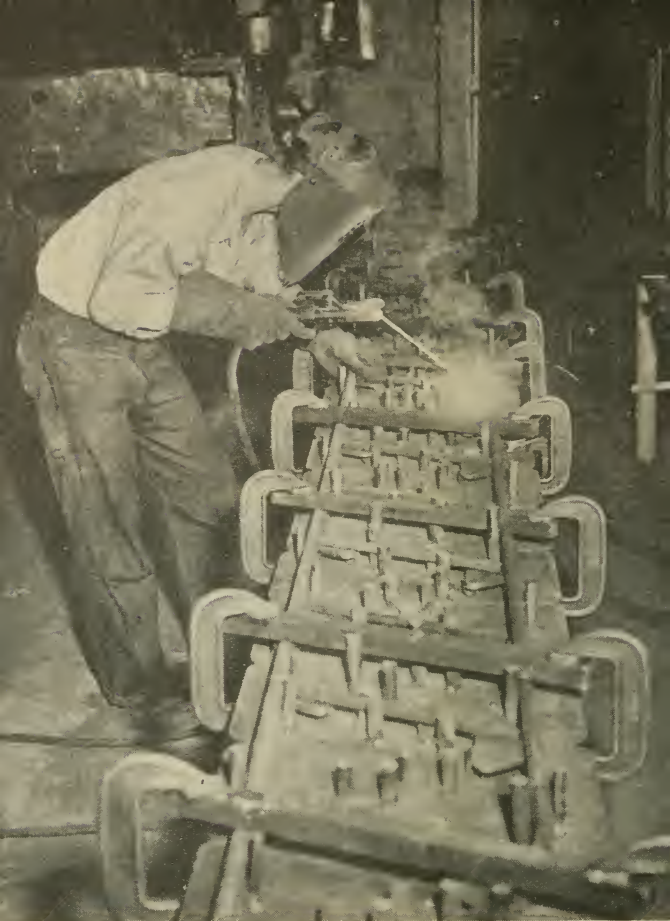
Welding

Electric And Oxy-Acetylene, Heli-Arc

This combination course is intended for apprentice welders, tackers, welder helpers, farmers, and sheet metal workers.

Electric Welding includes laying out, shearing, setting up and testing the general types of joints welded in the flat, vertical and overhead positions with different types and sizes of electrodes. Also the welding of sheet metal, cast iron and hard surface welding.

Acetylene Welding includes safety, the setup of equipment, preparation, welding and brazing of steelplate, cast iron, and aluminum, repair of broken farm equipment, the Heli-arc welding of aluminum and stainless steel.



There will be a small charge for material.
Class meets Tuesday and Thursday evenings,
7 to 10 P. M.

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